

MINES, MINING, LOCAL STOCKS AND COPPER

Metal Situation Looks Better With Assurance Of Loan Going Through

Local Producing Conditions Are Excellent From Every Standpoint—All of Local Companies Going Ahead at Rapid Pace in Production and Development; Interest Attaches to Arizona Gold Mines Throughout the Warren District.

Adjustment of the Foreign Exchange Problem Which Is Assured Now Within at Least, a Few Weeks Will Bring Surcease of Non-Activity in the Metal Buying Market; Producers Feel Future Will Bring Great Prices.

With local producing conditions excellent and those of other parts of the copper producing United States in a like condition, outside of the Clifton-Morenci districts where three producing companies have closed their plants pending a readjustment of labor conditions, and the metal market promising better things for the future, the outlook is indeed bright for the Warren District.

Copper metal, for some weeks past, has been hanging in the balance price around eighteen cents. During the past week it has been quoted at eighteen but the sales made have, no doubt, been slanted a trifle. This would not go to mean that any considerable stocks have been turned for that price for the majority of the larger consumers are either contracted ahead or holding their outputs for a better price, which is certain to materialize when the domestic and foreign consuming situations return to normal.

The foreign situation is, perhaps, the most sensational at the present time and easily charged to the premium that Europe must pay for copper, owing to the debasement of foreign exchange. The papers, for the past week, have been announcing success of the Anglo-French financial commission's mission in the United States. Most of the copper producers will be among the greatest industrial sources to profit by a readjustment of this condition between Europe and the United States. As it appears, at the present time, the loan will be made and when it is copper will, undoubtedly, resume its flow, in large quantities, from the United States to Europe.

The business world of the United States, and particularly that end of the business world which is looking to the future has eliminated all sentiment in the economic consideration of the Allies loan. Even the clearer thinking Pro-German business people realize that a good customer deserves credit and that when one nation extends credit to another or to a group of others the creditor nation becomes that much stronger in the world's finance.

The question of munitions has been a stumbling block in the negotiations for the loan. Copper is used extensively in the manufacture of munitions. It is hardly possible, however, that the commission will insist that France and England be allowed to expend their credit on shells and ammunition. This is not what the copper producers are demanding either. All business men and the manufacturers of munitions of war want a readjustment of the exchange problem. When Europe has to pay a premium of 4% or 7%, besides a war price, for her munitions, she is going to buy as little as possible, even in this day of rapid fire consumption shells.

A representative of a large copper agency says the establishment of a large foreign credit in this country will result in a heavy demand for copper.

"We have received advice," said he, "that foreign copper buying will be resumed on a large scale as soon as Europe and the United States reach an agreement as to the extent of the war loan."

"The big munition and steel orders from abroad that are now making their appearance indicate that there is going to be some very heavy buying of copper this fall."

"Industrial activity throughout the United States can mean nothing less than a heavy consumption of copper, although we have not experienced much buying over the last two months. There will be no need to curtail output."

"The upward tendency of copper prices abroad within the last week would seem to foreshadow that a good buying movement is not very far off."

LOCAL DEVELOPMENT.

Judging from the development now being carried on in the Warren District mines there is little fear of anything but good times, ahead, for months. Each and every one of the companies is forging ahead in its production of ore and is keeping far ahead in creating ore reserves.

SHATTUCK DEVELOPMENT.

For the month of August the report of the Shattuck development includes some very interesting figures, showing the breadth of that company's operations and the continued finding of rich copper on their property.

Cross-cut No. 4 on the 200 foot level has advanced 39 feet through a good grade of copper ore and will be continued to explore the ore zone. Cross-cut No. 17 on the 300 foot level advanced 23 feet in siliceous copper ore running 7% copper. Raise No. 147 on the 700 foot level advanced 10 feet through ore running 8% copper. Cross-cut No. 13 on the 800 foot level is in 20 feet of sulphide copper ore. Raise No. 140 on the 800 in 13 feet of copper oxide running 6% copper. Winze No. 19 on the 800 foot level runs 14% lead. Raise No. 151 on the 600 foot level is expected to encounter lead ore within 20 feet, which ore body is being stopped from, on the 500 foot level from cross-cut No. 52.

From these figures it is readily seen that the Shattuck holds well with all expectations as mining and development work continue. Shipments continue as usual.

COPPER QUEEN.

The new equipment in the Uncle Sam division of the company has arrived and has now been placed. It consists of a new steel head frame and a double drum electric hoist. So far the mine has not been operated as these needed have been obtainable from other mines of the company. A drift will be started, shortly, from the 400 foot level of the Car, to the Uncle Sam, 1600 feet long. There is every indication that the drift will tap the ore body of the Uncle Sam.

Work on the lead ore of the Southwest has been progressing and the

(Continued on Page Two.)

RAY CON. HAS GREAT RECORD SO FAR IN THE PRESENT YEAR

Big Company Operating on Porphyries Pays Good Interest Rate and Offers Promise of Better Things in Future.

The directors of the Ray Consolidated Copper Company have declared the usual quarterly dividend of 27 1/2 cents per share, which is at the rate of \$1.50 per share per annum, payable September 30 to stockholders of record September 15.

At the present market price of around \$22 per share, Ray Consolidated gives the investor a net return of 6.70 per cent per share, while his consideration about the usual return on these high-class copper shares. The total dividends disbursed by the company to date amount to \$3,514,596, including the last quarterly dividend which is payable on September 10, 1915, amounting to \$547,035. Assuming the rate of production for the past quarter equivalent to 14,524,280 pounds which was the production for the second quarter of the fiscal year, and with copper at 18 cents per pound, taking the cost of production at 9.123 cents per pound as in the previous quarter, Ray Consolidated is earning at the rate of \$5,151,504 per annum, which is at the rate of over \$3.50 per share per annum.

From the foregoing figures, it is quite conclusive that Ray Consolidated is earning more than double its dividend requirements and there does not seem to be any plausible reason why the dividend rate should not be increased or, at least, an extra dividend of from 25 to 50 cents per share declared, as, deducting this amount, there would be carried over to the reserve fund.

The Ray Consolidated Copper Company during the second quarter of the present year sold its product at an average price of 18.625 cents a pound, which was in excess of all other companies but the Magna Copper Company, which realized 19.02 cents a pound. The price obtained by both these companies was in excess of existing quotations. The rate of production for the third quarter has now been increased and earnings of the Ray Consolidated Copper Company should therefore be maintained despite the lower price for copper metal.

With its present dividend rate on the present selling price of the Ray Consolidated shares, it shows a fair return on the investment. The stock, however, has an additional speculative value in the probability of an extra dividend being declared at any time. In view of the increased earnings and the possibility of higher prices for copper.

The Ray Consolidated Copper Company has an issued capitalization of 1,454,929 shares of a par value of \$10 each, so that, at its present rate of production, Ray is earning in the neighborhood of 35 per cent on its original capitalization.

ANNOUNCES SOIL STUDY.

BOSTON, Sept. 25.—Charles B. Lipman of the College of Agriculture, University of California, announces through the proceedings of the National Academy of Sciences, the results of some studies on the nitrogen problem in arid soils, with especial reference to problems of soil fertility in California. He finds that one of the chief difficulties is the feeble nitrification of the soil. On truly arid soils it often happens, however, that some forms of nitrogen may be nitrified, while others cannot be.

Professor Lipman is therefore led to the conclusions that: 1. The addition and maintenance of a good supply of organic matter by green manuring or by the use of barnyard manure must be protected on all soils deficient in nitrogen and organic matter. 2. Nitrogenous fertilizers when employed on such soils must be either of the low grade organic variety such as steamed bone meal, cotton seed meal, and sewage sludge, or else sulphate of ammonia must be used. 3. The over-heating of the soil, excessive evaporation of moisture, the oxidation of organic matter should be prevented through the use of some kind of straw or manure mulch.

This is to be regarded as one of the most important measures for present and future soil management in California orchards and vineyards, when nitrogen and organic matter are deficient.

Falling Water is an active resource. Power is inherent therein. If not captured, it is unused, unproductive, and wasted.

FRENCH ANSWER GERMAN POISON GAS WITH LIQUID FIRE

The allies have determined to turn upon their foes with all the new methods of warfare which are being employed by the latter. After hundreds of women and children had been killed and wounded by Zeppelins in England the English and French began attacking German towns from the air and killing non-combatants. Then came the German poison gas attacks. The allies have not yet used poison gas on the Germans but are expected to soon. Last winter the Germans began using liquid fire on the French trenches. The French answer is seen in the picture, which shows a close view of French liquid fire apparatus sending thick columns of flame across the enemy trenches.



HUGE SUM IN WAGES PAID TO MINERS OF BUTTE, MONTANA, NOW

July Was the Largest Month in the History of Butte, as Far as Wages Are Concerned; 13,000 Men Employed There.

BUTTE, Mont., Sept. 25.—Although the Butte mining companies paid in wages in August about \$350,000 less than they did in July, nevertheless the payrolls last month aggregated \$1,700,000.

July was the biggest month in the history of the Butte mines, so far as the payment of wages is concerned, although the output of copper and the net earnings were not nearly so large as during some previous months.

There are fully 13,000 men employed in the Butte mines and the rate of wages fell from \$4 to \$2.75 per day because copper sold under 17 cents in August, the rate of wages being based on the price of copper.

The Anaconda company alone paid out \$1,139,000 for wages in August. The Butte & Superior paid out \$179,000, which was about \$5000 less than in July, and the North Butte paid \$39,000, the East Butte \$30,000, the Butte Hallaklava \$15,000 and the Clark properties \$60,000. It is estimated that the mining companies and other employers of labor in Butte pay out a total of \$2,600,000 in wages each month.

The mining companies have been gradually increasing their output of copper but the total is still far from what it was a few years ago. The Anaconda company's official report of August production shows the output to have been 22,800,000 pounds, the largest production of any month this year, and that includes the output of the North Butte company, nearly 1,800,000 pounds, and some other custom product.

During the other months of the present year the Anaconda company reported production as follows: January 13,700,000 pounds, February 15,100,000 pounds, March 19,000,000 pounds, April 21,800,000 pounds, May 20,800,000 pounds, June 22,100,000 pounds, July 22,100,000 pounds. In August of last year the output was 14,750,000 pounds, and in 1913 it was 22,500,000, in 1912, 25,250,000 pounds.

The copper producing companies now are the Anaconda, North Butte, East Butte, Butte Alex Scott, Elm Orlu, Davis-Daly, Butte-Hallaklava, Pilot-Butte and Tuolumne.

About the only development company operating in Butte at present is the Rainbow, a Cole company, which is engaged in developing the Rainbow and Butte & London properties. Sinking was resumed in the Rainbow shaft a few weeks ago and in the Butte & London last week.

HOW TO SELL A MINE

By CHARLES F. WILLIS

(Continued from last Sunday)

Then the Arizona Chapter of the American Mining Congress maintains an office in Phoenix, with a local branch in Globe and Tucson. One of the main objects of these offices is to bring together the buyers and sellers of mining property and to stimulate interest in the industry. The Arizona State Bureau of Mines also takes care of a great deal of this work. But both the Mining Congress and Bureau of Mines have some difficulty, owing to the data which is sent in by the owners of the properties. They do not tell the most important facts, and do tell a lot that is useless as a recommendation of a property. Hence these agencies, who charge nothing for their



Charles F. Willis, head of the State Bureau of Mines.

services, and whose sole aim is to benefit the industry, cannot send out a lot of names and addresses of owners of properties, as they have no authentic data regarding them.

If the inquiries of purchasers were merely answered by the sending of a long list of properties with no knowledge of their merits, the buyers would soon learn not to bother with these agencies, as they would secure a large quantity of chaff with the wheat, and the trouble of separating this chaff would be considerable. Hence it is the desire of these local agencies to be able to recommend to prospective purchasers properties which have the marks of promise and which are worthy of investigation by these prospective buyers. By some discrimination on the part of the local offices they will soon get a good reputation in this line, and will shortly be looked upon by the companies desiring mines

(Continued on Page Two.)

SHORT CLOSE DOWN TO AFFECT TONNAGE OF ONE BUTTE MINE

Ore Production of Butte and Superior Will Show Decrease for Present Month Owing to Few Days Close Down of Shaft.

BUTTE, Sept. 25.—The Black Rock mine of the Butte & Superior company was closed for four days last week to permit of some needed repairs and the suspension will probably show a decrease in the September output of the company. It had been more than a year since the last repairs were made in the shaft and some trouble was experienced recently.

The mine had been run at capacity for many months and no opportunity given to make needed repairs so that it became necessary to close the mine for several days, which was done when the Labor Day holiday came around.

In August the company broke all records for production, the company using all means to produce as much as it could. With the repairs just completed the company will make another ton run.

The production of speiser last month was about 14,500,000 pounds or nearly 1,800,000 pounds in excess of any previous month. This big output was made in spite of the fact that the tonnage of approximately 45,000 tons of ore mined and milled was not up to the July tonnage.

The increase in the production of zinc was brought about largely by the increased efficiency in securing results from the new machines in the oil flotation plant. The recoveries averaged 53 per cent, while the grade of concentrates was 56 per cent against 51 per cent in former months.

There was also some improvement in the grade of the ore mined and milled. "The improvement in the recoveries and grade of concentrates was brought about largely through the greater efficiency of the new machines," said Manager J. L. Bruce. "The adjustments are better in the flotation plant now and the results are showing what improvements have been made recently."

In regard to the report that a large body of copper glance has been found in the Black Rock mine, Mr. Bruce said: "There is no truth in that report. Such reports have been circulated from time to time, but there is little or no foundation for them. Once in a while a body of copper glance will be run into in certain parts of the mine, but there is no evidence that our zinc ores are giving way to copper in the districts where we are mining."

The same is true about reports that an unusual strike of zinc ore had been made. Nothing new has been found, but the known ore bodies are holding

(Continued on Page Two.)

ARIZONA-TOM REED ENTERS BIG ORE SHOOT

Work on the 400 Foot Level of the Lihah Claim's Ore Shoot Uncovers a Great Body of Ore for Development.

GATMAN DEVELOPMENT PROGRESSES RAPIDLY

The Old Trio Shaft of the Property Is Being Opened and Work Will Be Prosecuted on the Property.

GATMAN, Sept. 25.—President and General Manager Geo. E. Moser announces that a full crew of men is now at work on cross-cut of the Pioneer No. 1 shaft on the 400 foot level Arizona-Tom Reed.

From a careful survey it is estimated that the Lihah ore shoot will be reached inside of 250 feet, unless the vein should change in its dip, but in no event will it exceed 300 feet. As soon as the ore shoot is tapped and opened up, the company will start an upraise on their ground for a working shaft through to the surface. This is not only of great benefit to the Arizona-Tom Reed, but will give perfect ventilation to both the Pioneer and Lihah ore shoot exposed on the surface with small open cuts and shafts and now has exposed over 200 feet in length the apex of an ore shoot outcropping on the surface of the hanging wall side of the green chlorite andesite dyke, and about connecting with and starting at the hanging zone, which connects the Pioneer and Lihah veins. The shoot trends north-westerly from said faulting, large and practically parallel the large ore shoot of the Pioneer mine. As the richest shoots of ore under ground in this district, viz., Gold Road, United Eastern and Tom Reed are found in the hanging wall of the green chlorite andesite, it is reasonable to expect one of the large shoots of the camp to be opened up on the Lihah mine.

In addition to the Lihah ore shoot, President Moser has had the old Trio shaft cleaned out and is preparing to do some work on the Trio mine. Trio is the old shaft originally sunk by the prospectors Al James and Colenour from which Mr. Moser and associates purchased the Trio and Lihah mines. Several thousands of dollars of high grade ore came out of this shaft and on the surface leases on the north end of the Pioneer mine in the earlier days of its history actually passed the gold out of the rich andesite strainers and made gold slugs right on the ground. This high grade shoot of ore on the north end of the Pioneer dips and trends into the Trio mine and unquestionably the continuation of a drift from the 400 foot level of the Pioneer mine will prove this high grade ore shoot entering into the Arizona-Tom Reed mines.

Mr. Moser has full equipment at work, 500 cubic ft. compressor, air drills, hoisting plant, blacksmith shops of the Pioneer being used for the cross-cut on the 400 foot level until the Lihah ore shoot is struck. Mr. Moser, arranging with the Pioneer company for the use of this equipment, saved the Arizona-Tom Reed from having to spend thousands of dollars for equipment before they could get started on their work. The Pioneer, of course, derives mutual benefit, as they are having their entire andesite dyke cross-cut free of cost to them, and the completion of the cross-cut and the Arizona-Tom Reed shaft will give the Pioneer mine the ventilation it is so badly in need of. Furthermore, it gives these two mines a safety insurance for all underground working, giving two shafts to the surface from the 400 foot level of both mines.

Fifteen stamps, one Chilean mill, and four grinding-pans at the Eldorado Banket sold mine, in Rhodesia, reduced 57,972 tons in the year ended March 31. The duty was 5.25 and \$4.07 tons the first two machines. The three stages cost a total of \$118 per ton.